# 10. Raghav

## Program Name: Raghav.java Test Input File: raghav.dat

Raghav's math teacher gave an interesting problem with exactly 50 different integers with which to do various calculations.

The difference with this problem versus others is the students need to do the calculations to each number based on where the number is given. For instance, in the sample data below the first value is 72. Since it is first in the list, all calculations done on the number 72 are because it is the first number in the list and have nothing to do with the fact that the number is 72.

Here are the calculations and the order in which to do the calculations:

1) All even locations multiply by 2, odd locations add 7.
2) Multiples of 3 multiply by 5.
3) Multiples of 5, subtract 11.
4) Multiples of 7 square the number.
5) Multiples of 10 divide by 10.
6) Multiples of 11 find the square root.

**Note**: **Do not round the numbers** but instead provide the lowest integer answer.

For instance:

- Say the 33rd number in the list was 25. Since 33 is odd, a multiple of 3 and a multiple of 11, you would get the following result:

  $\sqrt{((\mathbf{25} + 7) * 5)} = 12$

- For a value 26 in position 45, which is odd, a multiple of 3, and a multiple of 5, this would be the resulting calculation and value in position 45.

  ((**26** +7) * 5) -11 = 154

- For a number in location 50 number, which might be 32, since 50 is even, a multiple of 5 and a multiple of 10, this the changed value in that position would be 5, like this:

  **((32 *** 2) -11) / 10 = 5

**Input:** Exactly fifty integers arranged vertically in the data file, the first to be considered in location 1, an odd numbered location, and the last in position 50, which is even.

**Output:** Fifty integers, output in vertical format, with the mathematical changes as described above.

**Sample Input (First 10 numbers only, arranged vertically in the data file)**

```
72    41    25    3     24    3     12    31    11    35
```

**Sample Output (First 10 numbers only, to be output in vertical format)**

```
79    82    160   6     20    30    361   62    90    5
```